

SURVIVING RUSH HOUR



*Tripper's Guide to
Motorcycle Commuting*

Introduction

"But isn't that dangerous?"

That's probably the question I hear most often when people learn that I have been commuting with a bike for most of my working life. Most people see bikes as rolling death-traps, and if the statistics are anything to go by, they are right. But statistics only tell a part of the story. They tell the part of people on bikes doing incredibly stupid things like driving under the influence and speeding where it isn't safe to speed. They tell the part of inexperienced riders riding on machines with mind-boggling performance, and of young riders who still believe in their own immortality.

So, when I reply: "Yes, it's dangerous, but you can manage the risks", members of my audience often shake their heads at what they consider to be my delusional nature. The thing is, I'm *not* delusional. The dangers are very real to me – I've come perilously close to an abrupt ending of my biking days (and of my life, as well) on several occasions. And I have walked away from those occasions badly shaken, and deeply grateful to still be alive. In time I came to realise that there was something to learn from each of those close shaves, and I began the practice of analysing each mishap to learn from them.

In a world in which there is an increasing tendency to shift blame and avoid responsibility for one's own actions, I took the road less traveled. Every time I came close to being in an accident, I tried

to determine what I did wrong, or what I could have done differently to avoid the situation in the first place. Yes, the *motorist* ignored the stop sign, but if I had slowed down while approaching the intersection, I would have had more time to react. Yes, the *motorist* changed lanes without indicating, but if I had anticipated his intention, I wouldn't have had to brake so hard to avoid hitting him. I realised that shifting the blame would not solve the problem, and solving the problem could keep me alive. I wanted to be in control, not to trust my life to the hands of some unknown motorist whose driving skills are, at best, questionable. And to do that, I needed to assume responsibility for my own safety.

Yes, the risks are real – riding a bike *is* dangerous. I said previously that the statistics tell only part of the story, but it's a part we had better pay attention to. So perhaps we should take a moment and listen

to what the statistics tell us, in the form of a study in 2001 by the US National Highway Traffic Safety Administration. Per mile traveled, say the statistics, a motorcyclist is approximately **16 times more likely to die** in a crash than an automobile occupant and **three times as likely to be injured**. What the statistics really say is that you are totally unprotected on your bike, and that should an accident happen, chances are you won't be able to walk away alive. Your best chance is in trying to avoid dangerous situations in the first place, because once you're in them the odds are against you.

You will note that the emphasis in this guide is on defensive driving, on predicting danger and avoiding it. That is because I believe that on a bike, unlike Lord Nelson's oft-quoted maxim, the best defence *is* in fact defence. This guide is not intended to be an advanced motorcycling course in condensed form; it merely points out some of the risks that I've identified while commuting, and some of the techniques I've developed to deal with those risks. I hope that it will be of value to you, and that it will help you to make your commuting trips safer. And if perhaps one day, only one person can say: "I am alive today because of what I've learned from reading your guide," it will have been worth all the hours I put into getting it done.



In conclusion, there are several people whose assistance I would like to acknowledge:

Thank you to "Buccaneer" of the Think Bike Campaign (www.thinkbike.co.za) for allowing me to post this guide as a series of articles in the Think Bike forum, as well as for supplying the photographs for the front and back pages. Thanks also to the Think Bike members who made suggestions and comments regarding contents, and especially to my wife and son for their support and understanding. Finally, a very special word of thanks to Ted Goldstein for proofreading the guide for me. Without your contributions this might have remained on my "to do" list indefinitely.

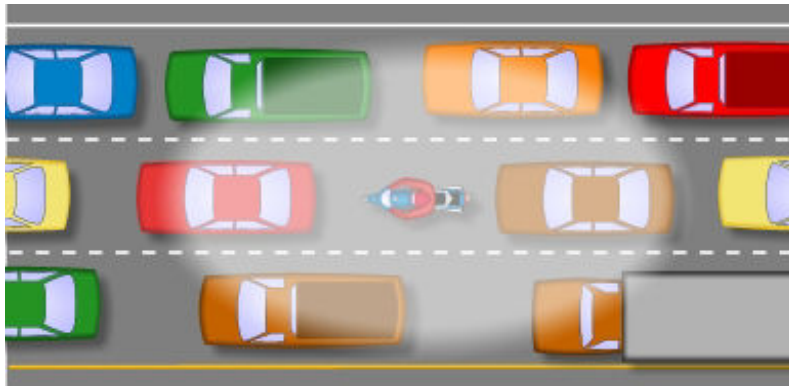
"Tripper"
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Situational Awareness

I'm going to start off by talking about something that is not just important when you commute, but whenever you are on your bike (or in your car). The term is situational awareness, and it originated in the US Air Force. In combat aviation, situational awareness effectively means knowing where the other aircraft in your airspace are, in which direction they are moving, and whether or not they are a threat to you.

It isn't difficult to figure how this can apply to riding a bike. Unless you're out on a leisurely Sunday drive with little or no traffic around you, having a constant mental image of who is around you and what they're doing could be a huge benefit in an emergency situation. So, how do you achieve it?

I'm most likely not going to be telling you anything new here – if you have a bit of commuting experience, you're probably already doing it automatically. But just to make sure we're on the same page, here goes: *look around and remember what you've seen*. The trick is to take a 'mental snapshot' and update it every time you look around. Remember the white car on your right-hand side? Is it still there, or has it dropped back? If it has dropped back, is it still in the same lane or has it changed lanes? And the red one on the other side – where is it now?



If you do this all the time, you'll soon begin to form a complete and constantly updated picture of the traffic. Having such a picture has three direct benefits:

- In an emergency situation, when there is little or not time to check the traffic before taking evasive action, you'll have a fair idea of who is where.
- In tight traffic, such as when you're lane-splitting, it can reduce the number of times you have to take your eyes off the traffic ahead for valuable seconds to check your mirrors.
- It helps you to cover your blind spots. If you check your mirror and the car which was back there a moment ago has now gone missing, chances are it has moved into your blind spot.

Don't get me wrong, situational awareness is not intended to replace observation. It doesn't mean you don't have to look in your mirrors anymore. It is just

one more arrow in your quiver to use in your battle with the dragon called Rush-Hour Traffic. Developing situational awareness takes a bit of practice if you're not used to it, but it is a habit well worth acquiring. Apart from the other benefits, it will also help to build your confidence in dealing with extreme traffic conditions.

But above all, it might save your life one day. It is better to have it and not need it, than to need it and not have it.

Predicting Traffic Behaviour

Wouldn't it be cool if you knew what every vehicle on the road was going to do before they did it? The truth is that experienced riders can actually predict traffic behaviour – it's not a black art, it's just a question of knowing which signs to look for.

The reason why it is important to be able to predict with reasonable accuracy what drivers are going to do, is because when commuting in traffic you often have very little space to manoeuvre should something go wrong.

This is especially important when you're lane-splitting, where you are sometimes separated from other traffic by mere centimetres.

With your reaction space so severely restricted, you lose most of your options in an emergency situation – you can't swerve, your escape routes are cut off, and you're most likely limited to braking as the only form of evasive action.

Personally, I hate to have only one option in an emergency situation; therefore, I work from the premise that prevention is better than cure – in other words, I try stop the problem from becoming a problem in the first place, rather than wait for it to happen and then react to it.

More often than not, drivers give tell-tale signs of what they intend to do. The most obvious one is a

car with an indicator going blinkety-blink – it doesn't take a rocket scientist to figure out that the car is going to make a turn or change lane at some point (although, in some cases, it simply means the driver knows how to operate the indicator stalk, and nothing beyond that).

But there are other less obvious signs that can also help you predict behaviour, especially when you're lane-splitting in heavy traffic. Cars will often edge slowly towards the adjacent lane before they change lanes. If you are approaching a car that's doing this, assume that he is going to change lanes and slow down to accommodate him.

Never accelerate to prevent a lane change – quite often the driver will be blissfully unaware of your presence, and you could end up being cut off at a speed too high to allow you to evade in time.

Be on the lookout for cars that accelerate or brake suddenly (especially if there are no obstacles in front of them) – they might do it to take a (real or imagined) gap in the next lane (see diagram above).

Sudden checking of mirrors is another indicator of an imminent lane change.

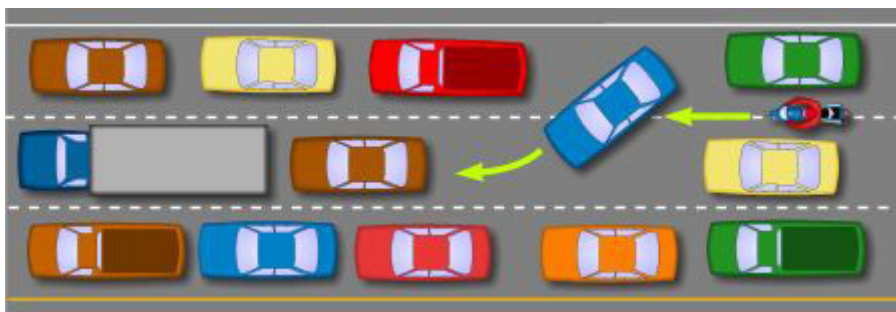
Most drivers tend to (rightly) focus more on the road ahead than on their mirrors, so a person who suddenly begins to look around is probably planning a lane change.

Again, rather assume it and be mistaken than ignore it and be in pain. If you're lane-splitting and there's a gap in one of the lanes, expect somebody to want to fill it. If there's a gap of several car lengths ahead of you, expect one or more of the cars in the adjacent lane to cut into your lane (see diagram above).

Often such a gap will be an opportunity for you to speed up reasonably safely, so be vigilant and prepared to take sudden evasive measures.

As you probably know, minibus taxis are true 'lane-surfers' – they will merrily jump from lane to lane in an attempt to get through traffic quickly. There is only one rule when approaching a taxi: expect the unexpected. Your only defence is to make sure the taxi driver is aware of you and be prepared to counter an unexpected swerve immediately.

I normally don't pass a minibus taxi if there is a gap in the traffic next to him (and even so, I've seen



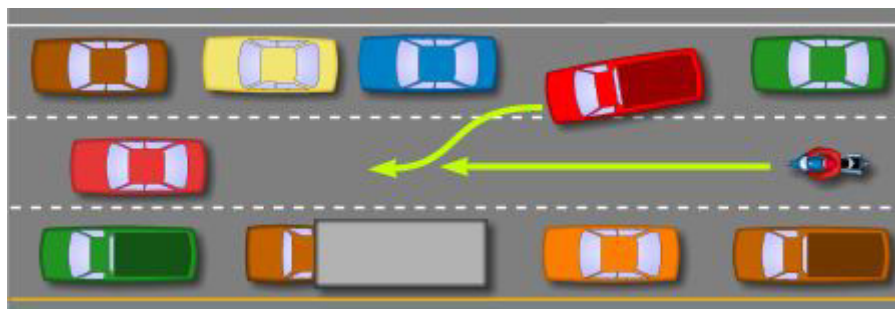
minibuses attempting lane changes with cheerful disregard to the fact that there is no space in the next lane).

A good trick is to try to notice

each car individually as you drive through the stream of traffic, ascertaining whether their indicators are on or off, considering their positions in the lane, and looking at the head movements of the drivers – don't worry about a mental overload: your brain is a remarkable computer, and you'll be surprised at how much information it can process.

It goes without saying that you can't do this effectively when you're going too fast; if it's too difficult, it's a good indication that you should

consider slowing down.



The key is not just to predict drivers' behaviour, but to be constantly prepared to deal with their moves. More

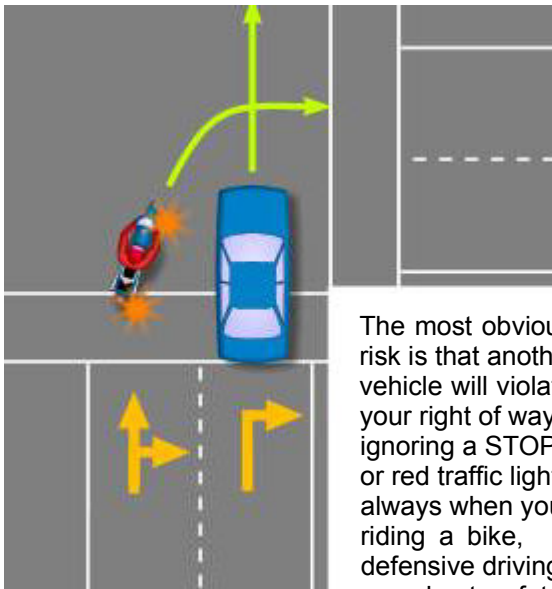
often than not, your best defence is to drop back, let the offending driver do whatever he wants to, and pass him when it's safe to do so.

I can't over-emphasise the importance of defensive driving on a bike, especially in traffic. Always remember that you are a lot less protected than people in a car, and precariously balanced at best. In an argument between a car and a bike, guess who's going to come off second best?

Get to your destination alive – all other considerations are secondary to that.

Intersections

Whether you are in a car or on a bike, intersections are among the most dangerous places on the road. Irrespective of who is at fault, as a biker you are at greater risk at intersections than any other road user.



The most obvious risk is that another vehicle will violate your right of way by ignoring a STOP sign or red traffic light. As always when you're riding a bike, defensive driving is your best safety

mechanism. Slow down for every intersection, even if the traffic light is green for you, or the STOP sign is for the crossing road. My favourite riding safety advice applies: "Hope for the best but prepare for the worst." Assume that every vehicle you see will do something that will endanger you, and be prepared to take evasive measures.

This includes checking your rear view mirrors to ensure that, should you suddenly have to brake hard, the vehicle behind you is far enough to slow down without hitting you. If he isn't, my suggestion is to slow down gradually – nine times out of ten, the driver behind you will become impatient and overtake you if you're going too slow. There's no shame in letting him pass you – he's less of a danger in front of you where you can keep an eye on him. Slowing down for every intersection may be tedious, but so is spending months in hospital.

One of the sad facts of driving in South Africa is that some people tend to ignore road markings. Consider this: you're in the right-hand lane on a

multi-lane road, your lane is discretionary (you can either turn or go straight), and the lane on your left is a compulsory turn-lane. It often happens that a car in the left lane will go straight across the intersection, despite the road markings (see

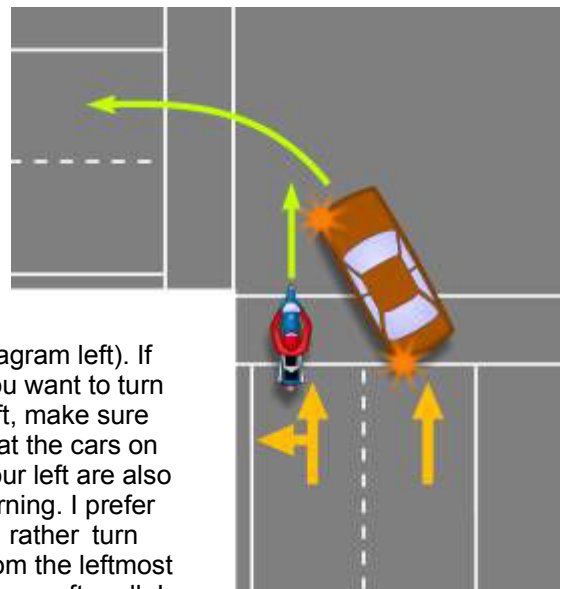


diagram left). If you want to turn left, make sure that the cars on your left are also turning. I prefer to rather turn from the leftmost lane – after all, I have enough acceleration to get into the correct lane after I have turned. Likewise, you could have the situation of the leftmost lane being discretionary, and a car in the right-hand lane wanting to turn while you intend not to turn. This

could result in the car (which has slowed down for the turn – see diagram above) cutting in front of you, or colliding with you.

Remember that at a STOP sign, the vehicle which has stopped first has right of way, even if he intends to turn. So, if the oncoming car has stopped before you and wants to turn, you have to wait for him to turn before you

pull off. Unfortunately many road users seem not to know this rule – if you want to turn and you have stopped first, they (wanting to go straight across) will often pull off under the assumption

that they have the right of way.

Again, in the spirit of defensive riding, rather let them go than try to force the issue at the risk of a collision.

Oncoming cars turning across your lane at traffic lights are also a potential risk. Car drivers often assume there is enough time for them to cross before you get to the intersection, and to be fair to them, it is hard to judge a bike's speed head-on. So again the key is to assume the car will cross and have your evasion plan ready in case he does.

This includes ensuring that you can safely brake hard if needed, being aware of any traffic around you that might prevent you from swerving, and identifying your escape route beforehand.

"Blind" intersections are especially perilous. I consider an intersection "blind" when a truck, minibus, SUV or any other tall vehicle or object prevents me from seeing the entire intersection. Take the scenario from the previous paragraph and a truck on your right, and now you have a disaster waiting to happen. The light-shaded area in the

illustration on the previous page represents your field of vision. The driver of the yellow car, who can't see you either, may believe the road is clear and turn. In a situation like this, where you can't see past the truck, assume there's a car just itching to turn and spoil your day. My advice is to slow down and (if the traffic allows it) move to the extreme left to increase your field of view around the truck. Keep going slowly until you've verified that no car is about to turn.

Considering that most accidents happen at intersections, it is obvious why bikers should consider them extremely dangerous. Always approach intersections with caution, try to predict what other road users are going to do, and rather yield to offending cars than risk getting yourself killed. The ultimate aim of biking should not be to prove your point at all costs, but to live to ride another day.

Lane-Splitting

One of the things that makes a bike such a practical vehicle for commuting is its ability to lane-split, or pass between traffic lanes. It saves you from being stuck in endless queues of rush-hour traffic like other vehicles, reduces your traveling time, and allows you to quickly navigate around traffic jams caused by accidents or inoperative traffic lights. Unfortunately it comes at a price: it's an extremely dangerous practice.

That doesn't mean you shouldn't do it – it just means you need to know the risks and be

extremely careful. If you follow a few basic guidelines, you can lane-split reasonably safely and still enjoy the advantages of a bike. The

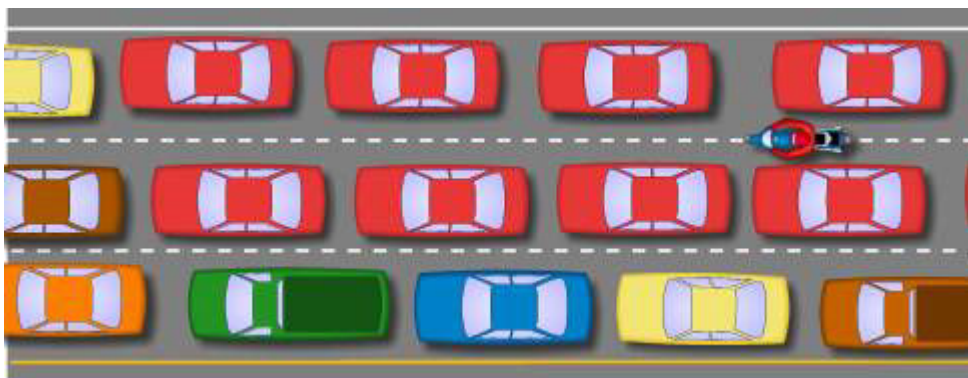
most important of these is that you have to be vigilant all the time. You have to be constantly aware of the traffic around and behind you, and three or four cars ahead of you. Do the math: two cars behind you, one more on either side of you and two lanes of three cars each ahead of you – that's 10 cars you have to keep track of simultaneously!

With any of the red cars in the image above likely to do something that can endanger you at any time, it goes without saying that speeding is not something

you want to do when lane-splitting. Based on an average reaction time of 0,3 seconds, at 30km/h you will travel 3m before you even begin to react to a threat. At 50km/h you will travel 4,5m and at 80km/h you will travel more than 7m. And remember, this excludes the distance your bike takes to come to a stop once you started braking.

In lane-splitting it's not speed that kills, it's differential speed (the speed difference between you and the surrounding traffic). My own rule is to limit my differential speed to around 35-40km/h, but

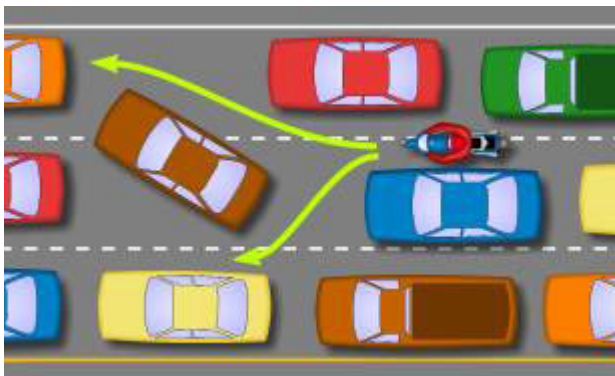
how fast you want to go will depend on a number of factors: your age (older people react slower than younger people), the weight of



your bike, whether or not you have ABS, and whether or not you have an escape route in case something goes wrong. But whatever speed you decide on, make sure you allow yourself sufficient space and time to react to a car suddenly swerving or stopping in front of you.

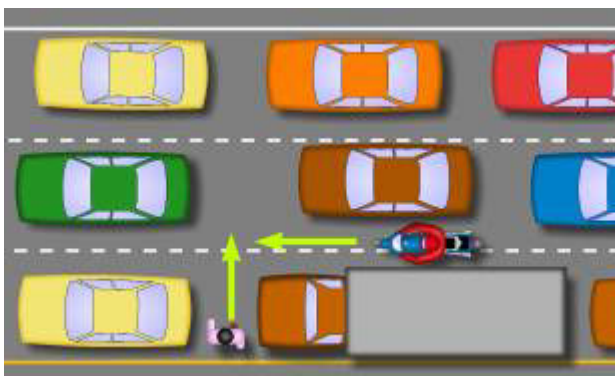
If you're wondering what I mean by an 'escape route', I simply mean somewhere else you can go if there's an obstruction in your way. For example, if you're lane-splitting in bumper-to-bumper traffic and the car directly in front of you suddenly changes

lanes, where will you go to avoid him? In the image below, the bike has two options. Keep a possible escape route in mind all the time, because you often don't have time to look for one when the smelly stuff hits the whirly thingie. And if there's no possible escape, reduce your speed. I've seen bikes lane-splitting at insane speeds, and while I admire their confidence in their reflexes, I have to wonder if they are really considering the possibility that something might go wrong.



The most important thing about lane-splitting is that you should be smart about – how often have you been in a car and seen a biker do something really stupid? And then you think to yourself: “There goes an accident looking for a place to happen.” Try to ensure that you're not such an accident-in-waiting.

Unless you're on a freeway (and in South Africa, sometimes even there), pedestrians are a constant hazard. If these good people would confine themselves to the designated crossings (or at least apply some common sense to their pedestrian progress), they would be of no concern to us, but unfortunately they don't. Instead they appear to take some perverted satisfaction from hiding behind tall vehicles and jumping out when we are too close to avoid them. The moral of the story is to always take care when you're passing tall vehicles like trucks, minibuses and SUVs – they can easily conceal pedestrians.

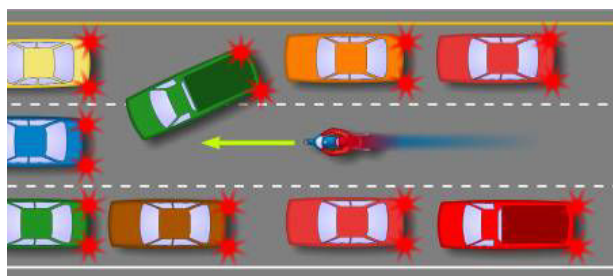


Trucks are the bane of our lives – They're wide, they're hard to see past, they generate a lot of turbulence, and they're slow. Two of them is bad news squared. If you're approaching two large trucks driving abreast, don't go between them. It

takes longer to pass a truck than a car, simply because there is more vehicle pass. Bear in mind that the driver's visibility is much more restricted than that of a car driver, and that it's likely that he doesn't even know you're there. Trucks are also harder to manoeuvre than cars – if the truck starts drifting towards you the driver is possibly not going to do much to prevent it. If this happens while there's another truck on your other side, you could be in big trouble: you can brake or accelerate, but either way it's going to take valuable seconds for you to get out from between them.

Since trucks rarely travel at the exact same speed, the best option is to wait until one has passed the other – that way you can deal with one truck at a time. I only ever consider splitting between two trucks when they are stationary, and then there are two rules that I follow: I make sure there is enough room for me to pass between the trucks before I go in, and I make sure they won't pull off with me still between them. Trucks are not a biker's friend; the best thing to do is get past them as quickly and as safely as possible.

If you are commuting on a highway, it is easy to succumb to the lure of speed. The problem is that your ability to accelerate quicker than cars can, could get you in trouble. Let's say you've sped up in a traffic-free part of the road and suddenly you see the traffic in front of you is stationary.



Let's also say that one lane is backed up more than the other, leaving an open lane on one side. The thing to remember in this situation is that it is likely that at least one of the cars in the filled-up lane is going to become impatient and change into the open lane.

If you are going at 120km/h and an almost-stationary car suddenly pulls out into your lane a few metres ahead (see image above), you'd better have either an escape route or a will ready. Rather approach the backup on the far side of the open lane, so that when this happens you will have left enough space for the car to move into without becoming a threat to you.

Always remember you're probably not the only biker who is lane-splitting on that particular stretch of road. Be on the lookout for others and be courteous towards them. Don't pull out of a lane into the 'bike lane' without checking your mirrors –

there might be another bike already there and moving faster than you are. Don't forget that you are as much a danger to another bike as a car is. When you're splitting, allow faster bikes to pass by pulling into the traffic lane. I usually signal before I do it, for two reasons: so that the bike behind me knows I'm aware of him, and to show him in which direction I intend to yield.

By the same token, be patient with a slower bike in front of you – he might be so busy concentrating on the traffic that he simply doesn't notice you. Don't ride too close while you're waiting for him to yield, because if something goes wrong you'll be too close to stop in time. And please thank him when

you go past – it's not just good manners but also encourages him to let you through again next time.

There's been much debate over whether or not lane-splitting is legal. I have been told that the act forbidding it has been repealed, but I can't confirm this as an absolute fact. But legal or not, in almost 30 years of biking, I have never been pulled over for lane-splitting – it seems to be OK to do it.

Lane-splitting may well be the single most dangerous thing you'll ever do on a bike, and if you're in doubt rather don't do it. But if you do decide to lane-split, do it properly, intelligently and as safely as possible – or as sure as God made little green apples, you'll suffer the consequences.

Emergency Situations

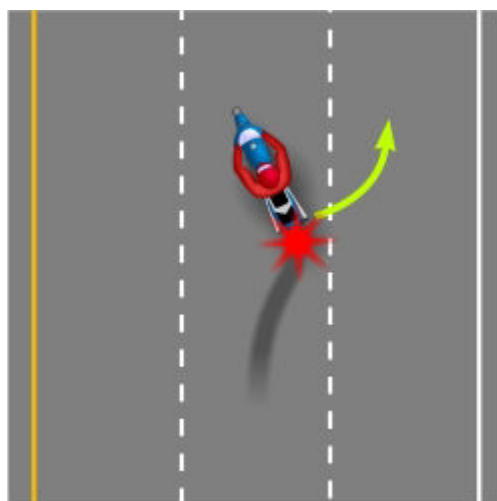
No matter how proficient you are, no matter how observant you are, no matter how careful you are, sooner or later you are likely to get into an emergency situation. Prevention may well be better than cure, but sometimes the luck is just not with us and we end up being in a jam.

The most likely flavour of the jam will be a solid object in your way – be it a vehicle, a pedestrian, an animal or a barrier. You basically have two choices in this situation: brake or avoid. Of these, avoidance is often the best option if traffic conditions allow, hence my emphasis on an escape route. As I previously said, by 'escape route' I mean somewhere else you can go if your intended route is unexpectedly blocked.

You should constantly consider possible escape routes while you are riding – just ask yourself: "If one the car in front of me suddenly does a lane-change and I don't have time to stop, where will I go?" The small size of a bike often allows you to take the tiniest of gaps, so keep your eyes peeled for gaps you can escape into.

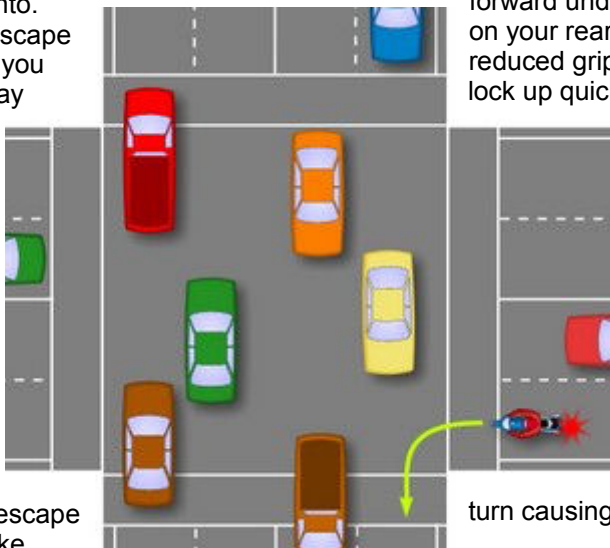
There are various possible escape routes, depending on where you are: at an intersection it may mean turning with the crossing traffic (see image on the right), on a freeway it may be the emergency lane, on the open road it may mean leaving to tarred surface to escape via the road shoulder or even into the veld. In the latter case, the risk of a puncture or falling is preferable to the risk of a collision.

If you don't have a possible escape route and you have to brake,



there's a right way to do it. The key to emergency braking is to stop as quickly as possible without locking a wheel. If you lock a wheel, you lose directional control. First of all, be careful the rear

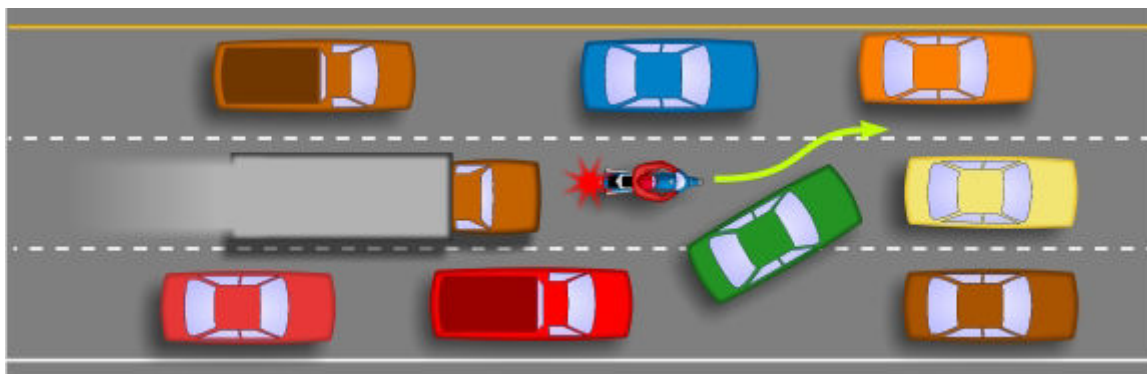
brake in emergencies – the sudden weight-shift forward under braking will reduce weight on your rear wheel, which translates into reduced grip, causing the rear wheel to lock up quicker.



As my science teacher explained to me when I was in school, rolling resistance is greater than skidding resistance – when the rear wheel locks, it will be moving faster than the (rolling) front wheel, and try to overtake it (above). This will cause the rear end of the bike to break out, in turn causing the bike to turn sideways.

At the same time, I don't want to advise you to ignore the rear brake altogether – the braking power of two wheels is greater than that of one wheel only. The technique I use is to start braking with the front brake, and gradually add rear brake if

Obviously this doesn't apply to ABS, which does the job for you – if you do have ABS, consult your user's manual for braking techniques. One of the reasons why I see braking as the last resort in an emergency, is the threat of being hit



I need more stopping power. This helps to combat the 'stomping' reflex in the first split-seconds of an emergency situation – you apply the rear brake as a conscious decision, not as a reflexive response. A good trick is to keep two fingers on the front brake lever at all times when you're in tight traffic – it will save valuable time in an emergency.

To avoid skidding the front wheel, apply your front brakes firmly but smoothly. Should you feel the front wheel begin to skid, release the brake briefly to re-establish traction.

It takes a lot of courage to release your brakes in the face of an imminent collision, but you'll stop quicker than you will with a skidding front wheel.

from behind. Bear in mind that a bike, weighing less, can stop in a shorter distance than a car can. It's fairly pointless hitting the brakes to avoid hitting a pothole if it results in you being run over by an 18-wheeler doing 120km/h barely a metre behind you (in the image above, escaping in the direction of the green arrow is a better option). If you're in tight, fast-moving traffic, this risk becomes extremely real.

This takes me back to what I said about situational awareness earlier in the series: if you have an idea of what's behind you and the emergency situation doesn't allow you the luxury of looking in your mirrors, you'll be in a better position to make an informed decision.

Conclusion

This, I think, is as good a place as any to conclude my guide. Thank you to everybody who has supported me in this undertaking, and especially to Think Bike for allowing me a forum to address something close to my heart. I hope you have found

this guide helpful (and perhaps even entertaining), but more than anything, I hope that I have contributed in a small way to safer biking. Be careful out there, and remember – getting there alive is more important than getting there first.

